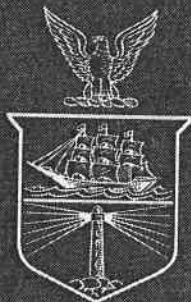


COMMERCIAL STANDARD CS212-57

Steel Sliding Closet Door and Frame Units

A recorded
voluntary standard of the
trade published by
the U. S. Department
of Commerce



**For sale by the Superintendent of Documents
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78-51223 COMMERCIAL STANDARDS

U. S. DEPARTMENT OF COMMERCE

SINCLAIR WEEKS, Secretary

Issued by

OFFICE OF TECHNICAL SERVICES

Commodity Standards Division

With the cooperation of

NATIONAL BUREAU OF STANDARDS

COMMERCIAL STANDARDS

Commercial Standards are developed by manufacturers, distributors, and users in cooperation with the Commodity Standards Division of the Office of Technical Services, and with the National Bureau of Standards. Their purpose is to establish standard methods of test, rating, certification, and labeling of manufactured commodities, and to provide uniform bases for fair competition.

The adoption and use of a Commercial Standard is voluntary. However, when reference to a Commercial Standard is made in contracts, labels, invoices, or advertising literature, the provisions of the standard are enforceable through usual legal channels as a part of the sales contract.

Commercial Standards originate with the proponent industry. The sponsors may be manufacturers, distributors, or users of the specific product. One of these three elements of industry submits to the Commodity Standards Division the necessary data to be used as the basis for developing a standard of practice. The Division by means of assembled conferences or letter referenda, or both, assists the sponsor group in arriving at a tentative standard of practice and thereafter refers it to the other elements of the same industry for approval or for constructive criticism that will be helpful in making any necessary adjustments. The regular procedure of the Division assures continuous servicing of each Commercial Standard through review and revision whenever, in the opinion of the industry, changing conditions warrant such action.

SIMPLIFIED PRACTICE RECOMMENDATIONS

Under a similar procedure the Commodity Standards Division cooperates with industries in the establishment of Simplified Practice Recommendations. Their purpose is to eliminate avoidable waste through the establishment of standards of practice for sizes, dimensions, varieties, or other characteristics of specific products; to simplify packaging practices; and to establish simplified methods of performing specific tasks.

Steel Sliding Closet Door and Frame Units

[Effective August 15, 1957]

1. PURPOSE

1.1 The purpose of this Commercial Standard is to establish standard sizes and construction requirements for steel sliding closet door and frame units, of the floor track or top-hung type, for the guidance of producers, distributors, architects, builders, and the public; to provide the building industry with standard steel sliding door and frame units; to avoid delays and misunderstandings; and to effect economies from the producer to the ultimate user through a wider utilization of these units.

2. SCOPE

2.1 This standard provides minimum requirements for steel sliding closet door and frame units, consisting of two panels of a bypassing type, where one panel disappears behind the other in operation, and where both panels are supported either by rollers on a floor track, or by rollers on an overhead track. The units are to be considered as manufacturers' stock items not subject to variation and are intended for use in interior applications where low-cost doors are normally required. The standard covers kind and thickness of material, sizes and types of panels and frames, general requirements, and labeling.

2.2 The standard covers the furnishing of doors and frames but does not include requirements for their erection.

2.3 It is believed that manufacturers' published details and this standard will provide all the essential information, and that approval drawings will not be required for these stock items.

3. MATERIAL

3.1 Steel shall be cold-rolled or hot-rolled, pickled and oiled, in the minimum United States standard gages (with decimal equivalents) given in table 1.

TABLE 1. *Steel gages*

Item	Gage	Equivalent thickness
	<i>No.</i>	<i>Inch</i>
Frames.....	18	0.0478
Door panels.....	20	.0359
Jamb and head members.....	24	.0239
Track.....	22	.0299

4. DIMENSIONS

4.1 *Method of measuring.*

4.1.1 Width shall be measured from inside to inside of frame jamb rabbets. The width shall be 36 inches for a 3-foot opening, 48 inches for a 4-foot opening, etc.

4.1.2 Height shall be taken from the lower end of the jamb to the underside of the head on the frame. The height shall be 80 inches for a 6-foot 8-inch frame.

4.1.3 Panel width shall be such as to provide a nominal overlap of $\frac{3}{4}$ inch when door panel is closed.

4.2 *Opening sizes.*—Doors and frames furnished in accordance with this standard are available in the following opening sizes:

Nominal sizes

3'0" x 6'8"

4'0" x 6'8"

5'0" x 6'8"

6'0" x 6'8"

5. TYPES

5.1 Panels may be of the flush or semiflush type.

5.2 Frames may be of the fully welded or knockdown type with corners either mitered or coped, in accordance with manufacturers' standards.

5.3 The design of frame members shall provide concealment for the vertical edge of the panels when door panel is closed.

5.4 Double track shall be provided. This track may be an integral part of the frame or supplied as a separate component.

6. GENERAL REQUIREMENTS

6.1 All shapes shall be formed in accordance with manufacturers' standard contours.

6.2 Frame joints may be continuously welded or secured with spot- or projection-welded splice plates, and all joints shall present a neat appearance.

6.3 Knockdown frames shall have an interlocking joint to produce a square corner, securely locked in place during erection so as to maintain alinement of parts and provide functionally satisfactory operation of completed frames.

6.4 Units shall be furnished with at least two rubber or plastic bumpers per vertical edge.

6.5 All doors and frames shall be neat in appearance and functionally satisfactory.

6.6 Knockdown-type frames shall be shipped bundled. Fully assembled frames shall be banded together in pairs for support in shipment. Spreaders are not required.

6.7 Panels shall be fully prepared for necessary operating hardware.

6.8 Frames shall be provided with anchors as required for the adjoining wall structure, which shall consist of three T-shaped adjustable anchors per jamb for masonry and three welded anchors per jamb for stud construction. The design of anchors shall be in accordance with manufacturers' standards, and they shall be of not less than 18-gage steel.

6.9 Frames for solid-plaster partitions with rock-lath or steel-lath cores shall be provided with three welded anchors per jamb, and a means of securing an adjustable-top strut for attaching to the ceiling during erection. Details of anchors and struts furnished with frame shall be in accordance with manufacturers' established standards, and the anchors and struts shall be of not less than 18-gage steel.

6.10 All frames shall be provided with a bottom anchor for fastening at the floor.

6.11 Panels shall be thoroughly cleaned and all visible surfaces finished with high-quality, baked-on primer.

6.12 Frames shall be thoroughly cleaned and shop-primed.

7. HARDWARE

7.1 *Sheaves or rollers.*—Each panel shall rest and roll on two sheaves or rollers of a design to fit the track and provide reasonable restraint against derailing.

7.2 *Guides.*—Each panel shall be provided with a guide or guides to provide lateral guiding for the panels and to restrain panels against accidentally rising and disengaging the track.

7.3 *Finger pull.*—Each panel shall have at least one finger pull of a recessed type to provide a satisfactory means of sliding the door.

8. LABELING

8.1. In order to assure the purchaser that he is getting a steel sliding closet door and frame unit of the quality specified, fabricators may individually or in concert with their trade associations issue certificates, or mark each sliding door unit by stamp or label as conforming to this standard. The following wording is recommended for the label:

This steel sliding closet door and frame unit conforms with all requirements of Commercial Standard CS212-57, as developed by the trade under the procedure of the Commodity Standards Division, and issued by the U. S. Department of Commerce.

(Name of fabricator)

9. STORAGE AND ERECTION

9.1 The following practices are recommended for the protection of all concerned:

9.1.1 Store panels and frames at the site on wood sills or on floors in a manner that will prevent rust and damage.

9.1.2 Install frames plumb, rigid, and in true alinement, and fasten to retain position and clearances during construction of partitions. Masonry frames should be filled with mortar as the wall is laid up. Frames in solid-plaster walls should be completely filled with plaster.

10. EFFECTIVE DATE

10.1 Having met all procedural requirements of the Commodity Standards Division, including approval by the acceptors hereinafter listed, this Commercial Standard was issued by the United States Department of Commerce, effective from August 15, 1957.

EDWIN W. ELY,
Chief, Commodity Standards Division.

HISTORY OF PROJECT

This standard was proposed by the Steel Door Institute, representing manufacturers of interior steel doors and frames. On July 7, 1954, the Institute requested the Commodity Standards Division, Office of Technical Services, to assist the industry in establishing a Commercial Standard for steel sliding closet door and frame units, and submitted specifications as a basis for the proposed standard.¹

On March 4, 1955, the Commodity Standards Division circulated the recommended standard to manufacturers, distributors, and users for acceptance.

A number of comments and suggestions for changes were received, which were reviewed and considered by the Institute's technical committee, and discussed at their meetings. As a result some of the suggested changes were approved, after which copies of the standard with the changes indicated were submitted to the acceptors for approval.

Firms and others interested submitted written acceptances, estimated to represent a satisfactory majority of the production volume and a sufficient cross section of the industry to insure successful application of the standard. Accordingly, the Commodity Standards Division announced on July 15, 1957, that the standard had been approved for promulgation as CS212-57, Steel Sliding Closet Door and Frame Units, and would be effective from August 15, 1957.

Project Manager: George E. Umhau, Commodity Standards Division, Office of Technical Services.

Technical Adviser: John L. Swinnerton, Plant Division, National Bureau of Standards.

STANDING COMMITTEE

The following individuals comprise the membership of the standing committee, which is to review, prior to circulation for acceptance, revisions proposed to keep the standard abreast of progress. Comments concerning the standard and suggestions for revision may be addressed to any member of the committee or to the Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce, which acts as secretary for the committee.

A. L. MUNSELL, Truscon Steel Division, Republic Steel Corp., 1315 Albert St., Youngstown 1, Ohio. (Acting Chairman.)

E. J. BOUGHTON, United Steel Fabricators, Inc., Wooster, Ohio.

W. F. SCOTT, Virginia Metal Products Corp., Orange, Va.

NOTE.—The committee was in the process of formation when the standard was published. The above list gives only the names of those who accepted membership prior to printing. A complete list of the members will be available from the Commodity Standards Division.

¹ See note on page 10.

ACCEPTANCE OF COMMERCIAL STANDARD

If an acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this Commercial Standard.

Date_____

Commodity Standards Division
Office of Technical Services
U. S. Department of Commerce
Washington 25, D. C.

Gentlemen:

We believe that Commercial Standard CS212-57 constitutes a useful standard of practice, and we individually plan to utilize it as far as practicable in the

production¹ distribution¹ purchase¹ use¹

of steel sliding closet door and frame units. We reserve the right to depart from it as we deem advisable.

We understand, of course, that only those products which actually comply with the standard in all respects can be identified or labeled as conforming thereto.

Signature of authorized officer_____

(In ink)

(Kindly typewrite or print the following lines)

Name and title of above officer_____

Organization _____

(Fill in exactly as it should be listed)

Street address_____

City, zone, and State_____

¹ Underscore the one that applies. Please see that separate acceptances are filed for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interests, trade associations, trade papers, etc., desiring to record their general support, the words "General support" should be added after the signature.

TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance:

1. *Enforcement.*—Commercial Standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices, and the like.

2. *The acceptor's responsibility.*—The purpose of Commercial Standards is to establish, for specific commodities, nationally recognized grades or consumer criteria, and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the standard, where practicable, in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function performed by the Department of Commerce in the voluntary establishment of Commercial Standards on a nationwide basis is fourfold: first, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or of the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.

ACCEPTORS

The organizations listed below have individually accepted this standard for use as far as practicable in the production, distribution, purchase, or use of steel sliding closet door and frame units. In accepting this standard they reserved the right to depart from it as they individually deem advisable. It is expected that products which actually comply with the requirements of this standard in all respects will be regularly identified or labeled as conforming thereto, and that purchasers will require such specific evidence of conformity.

ASSOCIATIONS

(General Support)

American Institute of Architects, New York Chapter, New York, N. Y.
Steel Door Institute, Cleveland, Ohio.

FIRMS AND OTHER INTERESTS

Amarillo Hardware Co., Amarillo, Tex.
American Welding & Manufacturing Co., Warren, Ohio.
Brust & Brust, Milwaukee, Wis.
Ceco Steel Products Corp., Chicago, Ill.
Central of Georgia Railway Co., Savannah, Ga.
Charlottesville Lumber Co., Charlottesville, Va.
Cohagen, Chandler C., Billings, Mont.
Conrad & Cummings, Binghamton, N. Y.
Crenshaw & Jost, Pekin, Ill.
Danser Hardware & Supply Co., Weston, W. Va.
Detroit, City of, Office of City Engineer, Detroit, Mich.
Eastman, A. Reyner, Rockford, Ill.
Flannagan, Eric G., & Son, Henderson, N. C.
Florida, University of, Department of Architecture, Board of Control, Gainesville, Fla.
Geren, Preston M., Fort Worth, Tex.
Getty, H. S., & Co., Inc., Philadelphia, Pa.
Hager, C., & Sons Hinge Manufacturing Co., St. Louis, Mo.
Haralson & Mott, Fort Smith, Ark.
Hastings, A. W., & Co., Inc., Somerville, Mass.
Hirzel, Charles K., New York, N. Y.
Kneeland-Bigelow Distributing Co., Bay City, Mich.

Larson Hardware Co., Sioux Falls, S. Dak.
Latenser, John, & Sons, Omaha, Nebr.
Law, Law, Potter & Nystrom, Madison, Wis.
Makielski, Stanislaw, J., Charlottesville, Va.
Merritt Lumber Yards, Inc., Reading, Pa.
Morse Hardware Co., Bellingham, Wash.
Parshelsky Bros., Inc., Brooklyn, N. Y.
Post, Geo. B., & Sons, New York, N. Y.
Post Iron Works, Inc., Brooklyn, N. Y.
Price, Beryl, Committee on Education & Research, American Institute of Architects, Philadelphia, Pa.
Rockwell Bros. & Co., Houston, Tex.
Schaeffer & Wilson, Bloomington, Ill.
Shenk, Henry, Co., Erie, Pa.
Spicola Hardware Co., Tampa, Fla.
Spiegel, Inc., Chicago, Ill.
Standard Equipment Supply, Ltd., Windsor, Ontario, Canada
Steelcraft Manufacturing Co., Rossmoyne (Greater Cincinnati), Ohio
Stoetzel, Ralph, Chicago, Ill.
Thorne, Henry Calder, Ithaca, N. Y.
Truscon Steel Division, Republic Steel Corp., Youngstown, Ohio
United Steel Fabricators, Inc., Wooster, Ohio
Virginia Metal Products, Inc., Orange, Va.
Weirton Steel Co., Division of National Steel Corp., Weirton, W. Va.
Welch, Carroll E., Huntington, N. Y.
Westcott & Mapes Inc., New Haven, Conn.
Willson, Fred F., Bozeman, Mont.
Wittenberg, Delony & Davidson, Little Rock, Ark.
Wuehrmann, Wm. G., El Paso, Tex.
Yale & Towne Manufacturing Co., Stamford, Conn.
Zimmerman, A. C., Los Angeles, Calif.
Department of the Army, Washington, D. C.

OTHER COMMERCIAL STANDARDS

A list of Commercial Standards may be obtained from the Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C. These publications may be purchased at the prices indicated on the list, which also includes directions for ordering copies.

NOTE

The Commercial Standard set forth herein is one of three standards relating to steel doors proposed simultaneously by the Steel Door Institute. The other two have been issued separately by the United States Department of Commerce under the titles:

Commercial Standard CS211-57, Flush-Type Interior Steel Doors and Frames.

Commercial Standard CS213-57, Steel Knockdown Sliding Closet Door Units (for Wood Frame Installation).

DEPARTMENT OF COMMERCE

National Bureau of Standards
VOLUNTARY PRODUCT STANDARDSNotice of Action on Proposed
Withdrawal

In accordance with § 10.12 of the Department of Commerce Procedures for the Development of Voluntary Product Standards (15 CFR Part 10, as amended; 35 F.R. 2340 dated May 28, 1970), notice is hereby given of the withdrawal of 111 Voluntary Product Standards identified below, including 78 standards identified as "Simplified Practice Recommendations" (R), and 33 standards previously identified as "Commercial Standards" (CS). Each of these standards has been found to be obsolete, technically inadequate, no longer acceptable to and used by the industry, or otherwise not in the public interest.

Public notice of the Department's intention to withdraw these standards was published in the Federal Register on February 10, 1971 (36 F.R. 2813), and a 45-day period was provided for the submission of comments or objections concerning the proposed withdrawal of any of these standards. No objections to the Department's intention of withdrawing any of these standards have been received by the National Bureau of Standards.

The effective date for the withdrawal of these standards will be 60 days after the publication of this notice. This withdrawal action terminates the authority to refer to these standards as Voluntary Product Standards developed under the Department of Commerce Procedures.

- R 4-36... Asphalt.
- R 8-50... Ferrous range boilers, expansion tanks, and solar tanks.
- R 9-47... Galvanized woven-wire fencing and barbed wire.
- R 19-37... Asbestos paper and asbestos millboard.
- R 21-46... Lavatory and sink traps.
- R 23-54... Plow bolts.
- R 26-50... Steel reinforcing bars.
- R 35-44... Steel lockers.
- R 38-37... Sand-lime brick.
- R 40-26... Sidewalk, floor, and roof lights.
- R 59-27... Rotary-cut lumber stock for wire-bound boxes.
- R 63-28... Metal spools (for annealing, handling and shipping wire).
- R 65-31... Packaging of overhead electric railway material.
- R 67-36... Taper roller bearings.
- R 68-41... Metal and nonconducting flashlight cases.
- R 69-27... Packaging of razor blades.
- R 71-28... Turnbuckles.
- R 74-49... Hospital and institutional cotton textiles.
- R 75-29... Composition blackboard.
- R 80-28... Folding and portable wooden chairs.
- R 82-28... Hollow metal single-acting swing doors, frames and trim.
- R 83-28... Kalamein single acting swing doors, frames, and trim.
- R 88-37... Floor sweeps.
- R 89-55... Coated abrasive products.
- R 92-38... Hard fiber twine and lath yarn (ply and yarn goods).
- R 93-39... Paper shipping tags.
- R 94-53... Open-web steel joists and open-web malleable steel joists.
- R 95-30... Skid platforms.
- R 97-47... Bell-bottom screw jacks.
- R 101-40... Metal partitions for toilets and showers.
- R 102-33... Granite curbstone.
- R 105-32... Wheelbarrows.
- R 107-31... Glassine bags.
- R 110-29... Soft fiber (jute) twine.
- R 112-29... Elastic shoe goring.
- R 115-30... Full-disk buffing wheels.
- R 119-31... Fast-selvaige terry towels.
- R 122-31... Wire insect-screen cloth.
- R 123-43... Carbonated beverage bottles.
- R 124-31... Polished cotton twine.
- R 126-41... Set-up paper boxes (used by department and specialty stores).
- R 127-41... Folding paper boxes (used by department and specialty stores).
- R 128-41... Corrugated fiber boxes (used by department and specialty stores).
- R 131-35... Glass containers for mayonnaise.
- R 138-32... Dental rubber (base and veneering).
- R 145-33... Packaging of electric railway motor and controller parts.
- R 154-38... Cupola refractories.
- R 156-11... Extracted honey packages.
- R 158-42... Forged axes.
- R 159-42... Forged hammers.
- R 160-42... Forged hatchets.
- R 161-35... Packaging of automotive (bus) engine parts.
- R 166-37... Color code for marking steel bars.
- R 169-45... Bolts and nuts (stock production sizes).
- R 171-38... Wooden boxes for canned fruits and vegetables.
- R 172-54... Stock folding boxes for garments and dry cleaning.
- R 177-41... Single-faced corrugated board rolls (used by department and specialty stores).
- R 178-41... First-aid unit dressings and treatments (packaging of).
- R 181-41... Nonferrous range boilers.
- R 188-54... Spring and slotted clothespins (sizes and packaging).
- R 189-42... Round and flat hardwood toothpicks (sizes and packaging).
- R 196-42... Glass containers for green olives.
- R 199-43... Cloth window shades.
- R 201-43... Iron and steel pop safety valves.
- R 202-48... Tank-mounted air compressors (1/4 to 10 horsepower).
- R 203-44... Containers and packages for household insecticides (liquid spray type).
- R 204-44... Bronze pop safety valves, and bronze, iron and steel relief valves.
- R 205-44... Iron and steel relief valves for petroleum, chemical and general industrial services.
- R 209-45... Peanut butter packages and containers.
- R 212-45... Cast brass solder-joint fittings.
- R 215-46... Luggage (trunks and suitcases).
- R 219-46... Automatic regulating valves.
- R 232-48... Low-pressure lubricating devices.

- R 233-48... Rotary files and burs.
- R 234-48... Welded-wire fabric reinforcement concrete pipe.
- R 240-52... Plastic tableware.
- R 253-54... Retail container sizes for frozen fruits and vegetables.
- R 260-63... Gypsum board products.
- CS 3-40... Stoddard solvents (dry cleaning).
- CS 7-20... Standard weights malleable iron or steel screwed unicus.
- CS 10-32... Foundry patterns of wood.
- CS 32-31... Cotton cloth for rubber and pyroxylin coating.
- CS 36-33... Fourdrinier wire cloth.
- CS 48-40... Domestic burners for Pennsylvania anthracite (underfed type).
- CS 50E-41... Oak flooring (exports).
- CS 50-44... Textiles-testing and reporting.
- CS 62-38... Colors for kitchen accessories.
- CS 63-38... Colors for bathroom accessories.
- CS 68-38... Liquid phyochlorite disinfectant, deodorant, and germicide.
- CS 93-50... Portable electric drills (exclusive of high frequency).
- CS 94-41... Calking lead.
- CS 95-41... Lead pipe.
- CS 96-41... Lead traps and bends.
- CS 102E-42... Diesel and fuel-oil engines (export classifications).
- CS 108-43... Treading automobile and truck tires.
- CS 110-43... Tire repairs—vulcanized (passenger, truck, and bus tires).
- CS 112-43... Homogeneous fiber wall-board.
- CS E124-45... Master disks.
- CS 126-56... Tank-mounted air compressors (classification and testing).
- CS 139-47... Work gloves.
- CS 154E-49... Wire rope (export classifications).
- CS 164E-50... Concrete mixers (export classifications).
- CS 170-50... Cotton flour-bag (sack) towels.
- CS 175-51... Circular-knitted gloves and mittens.
- CS 179-51... Installation of attic ventilation fans in residences.
- CS 181-52... Water-resistant organic adhesives for installation of clay tile.
- CS 212-57... Steel sliding closet door and frame units.
- CS 213-57... Steel knockdown sliding closet door units (for wood frame installation).
- CS 221-59... Gel-coated glass-fiber-reinforced polyester resin bathtubs.
- CS 222-59... Gel-coated glass-fiber-reinforced polyester resin shower receptors.
- CS 229-60... Copper drainage tube (DWV).

LEWIS M. BRANSCOMB,
Director.

APRIL 15, 1971.

Approved: April 19, 1971.

JAMES H. WARELIN, Jr.,

Assistant Secretary
for Science and Technology.

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